Title: Covariates of perceived colon cancer risk
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Study rationale/description: Perceptions of cancer risk are a central construct in most health behavior theories, and are an important empirical predictor of a number of health-related activities, including behavioral risk reduction and cancer screening. While our health behavior theories predict that increased risk perceptions subsequently motivate health behavior change, examination of the covariates of risk perceptions in a cross-sectional data set can identify factors important in the development of risk perceptions, and can inform the development of risk communication strategies aimed at encouraging the adoption of health behaviors. The current study examines covariates of perceived colorectal cancer risk.

A previous study examining correlates of perceived colorectal cancer risk among higher-risk men found that family history of colorectal cancer, colorectal cancer worry, family support for screening, and smoking behavior were important factors related to increased risk perceptions, and that the findings differed somewhat by whether the men had a history of colorectal polyps (Vernon et al., 2001). The current study will advance our understanding by allowing for a detailed assessment of general and colorectal-specific cancer knowledge, neither of which has been systematically studied in relation to perceived colorectal cancer risk. Additionally, previous work has not systematically examined risk perceptions across racial/ethnic subgroups. We will use data from this representative, national dataset (HINTS) to examine covariates of perceived colorectal cancer risk, including demographics, general cancer and colorectal-specific knowledge, behavioral risk factors for colorectal cancer, family history, and colorectal cancer worry.

Research questions to be examined include:
1) What are the covariates of perceived colorectal cancer risk, and what are the relative contributions of these covariates (e.g., demographics, cancer knowledge, behavioral risk factors, family history, colon cancer worry) on perceived colorectal cancer risk?
2) How do colorectal cancer risk perceptions and the related covariates differ across racial/ethnic groups?
3) Does cancer knowledge moderate the relationship between behavioral risk factors and perceived colorectal cancer risk?

Variable list:

Perceived Colorectal Cancer Risk

Overall risk	*CC1ChanceColonCancer*	How likely do you think it is that you will develop colon cancer in the future?
Relative risk	*CC2RelativeChanceColon Cancer*	Compared to the average (man/woman) your age, would you say that you are … more/less/about as likely to get colon cancer?

Demographics

Age	*SPAge*
Gender	*SPGender*

Race/ethnicity	DM4Hispanic; DM5Race
Education	DM6Education
Income	HHIncA; HHIncB

Knowledge – General Cancer

Reducing cancer risk	CK4ReduceCancer	Can you think of anything people can do to reduce their changes of getting cancer?
Diet changes	CK5EatReduceCancer	What specific changes should people make in their eating habits to reduce their chances of getting cancer?
Cancer tests	CK6TestsReduceCancer	You said that people should get tested for cancer. What kinds of tests do you have in mind?
Cancer causing highest deaths	CK15CancerCauseMore Deaths	Which type of cancer do you think will cause the most deaths in [women/men] this year in the U.S.?
Fruit & veg	FV4NumberServings	How many servings of fruits and vegetables do you think a person should eat each day for good health?
Exercise lower cancer risk	EX3ExerciseLowerCancer	Can exercise help to lower the chances of getting some types of cancer or does exercise not make much difference?
Exercise lowers risk which cancers	EX4ExerciseLowerWhich Cancer	Which type or types of cancer or don't you know?

Knowledge – Colon Cancer

Colon cancer tests	CC4TestsForColonCancer	Can you think of any tests that detect colon cancer?
Fecal occult blood test	CC4AEverHeardStoolBlood	Have you ever heard of a fecal occult or stool blood test?
FOBT frequency	CC15FreqBloodStool	In general, once people start doing home stool blood tests, about how often should they do them?
Sigmoidoscopy/co lonoscopy	CC15AEverHeardSigCol	Have you ever heard of a sigmoidoscopy or a colonoscopy?
Age start sigmoidoscopy/col onoscopy	CC24AgeSigCol	At what age are people supposed to start having sigmoidoscopy or colonoscopy exams?
Freq. sigmoidoscopy/col onoscopy	CC25FreqSigCol	In general, once people start having sigmoidoscopy or colonoscopy exams, about how often should they have them?
Age colon cancer risk	CC27RiskColonCancer	When would you say the risk of colon cancer is highest?

Behavioral Risk Factors

Current smoking	TU1Smoke100; TU2SmokeNow	Have you smoked at least 100 cigarettes in your entire life? Do you now smoke cigarettes … every day/some days/not at all?
Fruit and veg.	FV1Fruits; FV2FruitJuice; Fv3Vegetables; FV3aPotatoes	During the past month, how often did you eat … fruit, fruit juice, vegetables, potatoes?
Regular exercise	EX2Sweat	At least once a week, do you engage in regular activity such as brisk walking, jogging, bicycling, or another activity long enough to work up a sweat?

Overweight/ obesity	*HW1Height_Feet; HW2Weight*	About how tall are you without shoes? About how much do you weight without shoes?

Family History

Family history	*CH4FamilyEverHadCancer*	Have any of your brothers, sisters, parents, children, or other close family members ever had cancer?

Colon Cancer Worry

Colon cancer worry	*CC3FreqWorryColonCancer*	How often do you worry about getting colon cancer?

Statistical analyses:

A set of preliminary analyses will examine the interrelationships among the general cancer knowledge items and the colon cancer knowledge items. Factor analyses may be employed to guide the creation of appropriate cancer knowledge indexes. We will also examine the bivariate association between the two perceived colon cancer risk dependent variables (overall risk and relative risk). Our primary analyses will include a series of multiple linear regression analyses (including interaction effects, as appropriate), with perceived colon cancer risk as the dependent variable.

Reference:

Vernon, S. W., Myers, R. E., Tilley, B. C., & Li, S. (2001). Factors associated with perceived risk in automotive employees at increased risk of colorectal cancer. *Cancer Epidemiology, Biomarkers, and Prevention, 10*, 35-43.